NCERC Safety Basis Update

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LANL

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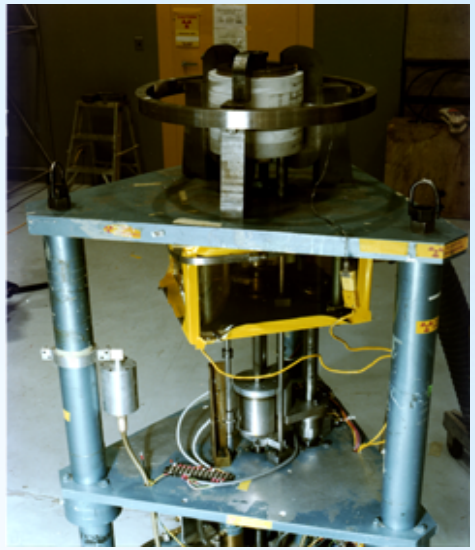
NCERC Safety Basis Challenges

- Safety Basis Owned by the Nevada National Security Site (NNSS) Management and Operations Contractor, National Security Technologies, LLC (NSTec)
- Documented Safety Analysis (DSA) Level of Detail is High
- Device Assembly Facility (DAF) DSA is 2300+ pages and National Criticality Experiment Research Center (NCERC) DSA Addendum is 800+ pages
- Separate Technical Safety Requirements (TSRs) Documents, DAF TSRs and NCERC TSRs
- Inconsistencies between DAF DSA and NCERC DSA Addendum
- Lengthy Change Process with Multiple Stakeholders
- Several DSA Changes in Progress at the Same Time

Annual Update

Status: Safety Evaluation Report (SER) Issued,
Implementation in Progress



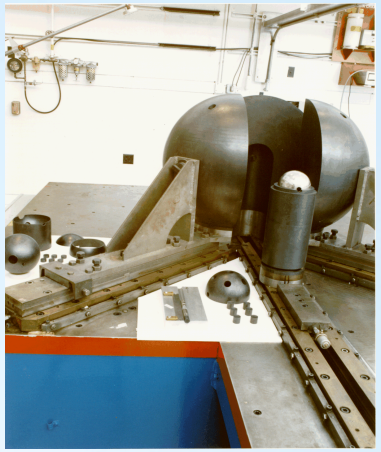
- Previous Annual Updates
  - DAF DSA - February 2011
  - NCERC DSA Addendum – April 2009
- Scope of the NCERC Annual Update in Progress Includes:
  - Incorporation of Changes from USQDs
  - Addition of a Firewatch Specific Administrative Control (SAC)
  - Incorporation of Criticality Safety Controls Elevated by the Criticality Control Review (CCR) Process
  - Resolution to Previous SER Issues
- Scheduled Completion date of the Annual Update Implementation is May 26, 2016

Change Notice 1

Status: 100% Draft Submitted to the Nevada Field Office, NFO Comments Generated

- Creates a New Operational Mode, Fire Suppression System (FSS) Impaired Mode
  - Operable FSS Not Required While Radioactive Material is Present
  - Radioactive Material Must be in Approved Closed Metal Containers
  - Critical Assemblies Must be Shutdown
- Change Notice 1 (CN1) is being Developed in Advance of the Repair to the FSS Lead-in Lines to the DAF
- Scheduled Completion Date of CN1 Implementation is June 8, 2016.

Change Notice 3



Status: Safety Basis Strategy has been Drafted and Reviewed by Stakeholders

- Low Radiological Material At Risk Operations (MAR) mode
- Increase of the Radiological MAR Limit for the NCERC Vaults
- Increase of the Radiological MAR Limit for Powder in NCERC Buildings
- Increase of the Radiological MAR for Metal on Comet and Planet Critical Assemblies
- Revision of the Surveillance Requirement Addressing Comet, Planet, and Flat-Top Hydraulic Oil Cleanliness
- Increase of the Fire Suppression System Disabled Time Period Prior to Godiva Burst Operations
- Elimination of Inconsistencies between the NCERC DSA Addendum and the installed equipment – do not affect the hazards or accident analyses
- Scheduled Completion Date of CN3 Implementation is April 5, 2017

DAF DSA Rewrite Project

Status: 60% Draft is in Development, Revision to the Safety Basis Strategy is Out for Review by Stakeholders

- Combines DAF DSA and NCERC DSA Addendum
- Combines DAF TSR and NCERC TSR
- Written in Compliance with DOE-STD-3009-2014
- Specific NCERC Initiatives:
  - Reduction of Any Unnecessary Detail
  - Increase the Combustible Loading Limit for NCERC Buildings
  - Explore Changes to Operational Modes to Increase Operational Efficiency
- Scheduled Completion Date of the DAF DSA Rewrite Project is June 5, 2018